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U.S. Patent Application

Applicant : Vasilios Toutountzis  
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Filed : October 21, 1999  
Title : TERMITE CONTROL  
Our File : T257.312-0005

**PRESENTLY PENDING CLAIMS 1-20, 25, 29, 32 and 62-97, AFTER ENTRY OF AMENDMENT FILED AUGUST 29, 2000, WITH UNDERLINING AND BRACKETING INCLUDING UNDERLINING THE ENTIRE TEXT OF REINSTATED CLAIMS 9-20 AS A NEW INSERTION;**

1. (Twice Amended) A termite barrier which is substantially resistant to termite chewing and corrosion, the termite barrier comprising[:]  
a mesh sheet formed of a material [resistant to breakdown in the environment of use and] substantially resistant to termite secretions, said material having a hardness of not less than about Shore D70 for resistance to termite chewing, the mesh sheet having pores, wherein the pores are open to permit fluid flow therethrough, the pores having a maximum opening dimension less than 3.25 millimeters [wherein each pore has a linear dimension in all directions less than the maximum linear dimension of the cross section of the head of the species of termite to be controlled], the mesh sheet being positioned in relation to a structure and ground underneath the structure to provide a termite barrier for the structure.

2. (Amended) The termite barrier as claimed in claim 1, wherein the pores of the mesh sheet have a linear dimension in at least one direction[, less than the minimum lineal dimension of the cross section of the head of the species of termite to be controlled] of not more than 0.85 mm.

3. (Amended) The termite barrier as claimed in claim 1, wherein the pores of the mesh sheet are polygonal with the maximum diagonal dimension less than [the maximum linear dimension of the cross section of the head of the species of termite to be controlled] 3.25 mm.

4. The termite barrier as claimed in claim 1, wherein the pores of the mesh sheet are rectangular in shape.

5. The termite barrier as claimed in claim 4, wherein the rectangular pores each have a

diagonal dimension less than 0.85 mm.

C 6. (Amended) The termite barrier as claimed in claim 4, wherein the rectangular pores are dimensioned 0.40 mm by 0.70 [min] mm.

7. The termite barrier as claimed in claim 1, wherein the mesh sheet is made of a corrosion resistant grade of stainless steel.

8. The termite barrier as claimed in claim 1, wherein the mesh sheet is bonded to or embedded in a moisture impervious sheet.

9. (Amended) In combination with a building structure erected on a ground level concrete slab, a termite barrier which is substantially resistant to termite chewing and corrosion, the termite barrier comprising:

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FIG. 1  
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a mesh sheet made of a material substantially resistant to termite secretions and having a hardness of not less than about Shore D70 for resistance to termite chewing, the mesh sheet having pores, the pores having a maximum opening dimension of less than 3.25 mm, the termite barrier being positioned beneath an underside of the slab and extending to a perimeter of the slab in all directions and upwardly about the perimeter of the slab to a distance above the slab and above the ground level adjacent thereto.

10. (Amended) The combination as claimed in claim 9, further comprising a member projecting through the termite barrier and the slab, and a termite barrier sleeve integral with the termite barrier located beneath the slab and clamped in pressure engagement therewith about the perimeter of the member.

11. The combination as claimed in claim 10, wherein the sleeve is formed by cutting an opening in the termite barrier, said opening having a perimeter less than the perimeter of the member and stretching and deflecting the marginal area of termite barrier about the opening to

form the sleeve.

12. (Amended) A cable having a core of conductive member or members, and a protective covering surrounding the core, said covering including a termite barrier which is substantially resistant to termite chewing and corrosion, said termite barrier surrounding said core and comprising a mesh layer formed of a material substantially resistant to termite secretions and having a hardness of not less than about Shore D70 for resistance to termite chewing, the mesh sheet having pores wherein each pore has a linear dimension in all directions less than 3.25 mm.

13. (Amended) In combination, a foundation structure for supporting a building, a termite barrier which is substantially resistant to termite chewing and corrosion for shielding the foundation structure to protect the building from termite invasion, the termite barrier comprising a mesh sheet formed of a material resistant to termite secretions and having a hardness of not less than about Shore D70 for resistance to termite chewing, the mesh sheet having open pores permitting fluid flow therethrough, each open pore having a maximum opening dimension of less than 3.25 mm, the termite barrier covering the foundation structure to protect the building supported thereon against termites.

14. (Amended) In combination with a building structure erected on a ground level or near ground level concrete slab, and having a non integral termite resistant adjacent structure, a strip of termite barrier material which is substantially resistant to termite chewing or corrosion, the termite barrier material comprising a mesh sheet made of a material substantially resistant to termite secretions and having a hardness of not less than about Shore D70 for resistance to termite chewing, the mesh sheet having pores wherein each pore has a maximum opening dimension of less than 3.25 mm, said strip of termite barrier material having respective marginal edge portions along opposite longitudinal edges of the strip integrally secured to the slab and the adjacent structure to establish integrity of the connection between the slab and the adjacent structure against the passage of termites.

15. The combination as claimed in claim 14, wherein the adjacent structure is a further

concrete structure.

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16. The combination as claimed in claim 14, wherein the adjacent structure is composed substantially of a building material selected from the group consisting of brick, natural stone, rock, concrete block, steel and aluminum in block or sheet form.

17. (Amended) The combination claimed in claim 14, wherein the slab and the adjacent structure are each cast in-situ concrete components, the respective marginal edge portions of the termite barrier strip being embedded into the slab and adjacent structure during the pouring of the concrete.

18. (Amended) The combination claimed in 14, wherein the slab and adjacent structure are each preformed and the combination further comprises an adhesive resistant to attack by termites for bonding the marginal edge portions of the strip of termite barrier material to the slab and adjacent structure.

19. The combination claimed in claim 18, further comprising a mechanical fastener for additionally securing the respective marginal edge portions of the termite barrier strip at spaced intervals along the length thereof.

20. (Amended) A post or column to be erected with an end portion thereof embedded in the ground, said end portion being enclosed in a protective sleeve closed at one end, said sleeve being made from a mesh sheet of a material substantially resistant to termite secretions and having a hardness of not less than about Shore D70 for resistance to termite chewing, the mesh sheet having pores wherein each pore has a maximum opening dimension less than 3.25 mm.

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21. Canceled.

22. Canceled.

23. Canceled.

24. Canceled.

25. (Amended) A method of termite barrier installation for a building structure,  
comprising the act of:

during erection of the building structure on a slab of concrete at or near ground level,

positioning a sheet coextensively with at least a portion of the slab, the sheet

being formed of a material substantially resistant to termite secretions, the

material having a hardness of not less than about Shore D70 for resistance to

termite chewing, the mesh sheet having open pores permitting fluid flow

therethrough, the open pores having a maximum opening dimension of less than

3.25 mm to thereby exclude entry of termites into the building structure through

said portion of the slab.

26. Canceled.

27. Canceled.

28. Canceled.

29. The method of termite barrier installation as claimed in claim 25 comprising casting the  
slab in-situ, and wherein the positioning of the sheet comprises positioning the sheet beneath the  
slab prior to pouring of concrete over the sheet to cast the slab.

30. Canceled.

31. Canceled.

32. The method of termite barrier installation as claimed in claim 25 wherein the positioning  
of the sheet comprises embedding the sheet in the slab.

33. Canceled.

34. Canceled.

35. Canceled.

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- 37. Canceled.
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- 55. Canceled.
- 56. Canceled.
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- 58. Canceled.
- 59. Canceled.
- 60. Canceled.
- 61. Canceled.

62. In combination with a building structure erected on a ground level or near ground level concrete slab, a termite barrier comprising:

an adjacent structure, built adjacent to but non-integrally with the building structure, the adjacent structure built of a termite resistant material; and

a strip of termite barrier material formed of a flexible sheet made of a material substantially resistant to termite secretions and having a hardness of not less than about Shore D70 for resistance to termite chewing, the strip having pores wherein each pore has a maximum opening dimension of less than 3.25 mm, said strip of termite barrier material having respective marginal edge portions along opposite longitudinal edges of the strip integrally secured to the slab and the adjacent structure to establish integrity of the connection between the slab and the adjacent structure against the passage of termites.

Please add claims 63 - 97 as follows:

63. The combination as claimed in claim 14 wherein the strip of termite barrier material has between the respective longitudinal marginal edge portions thereof a re-entrant fold which extends longitudinally to provide flexibility and freedom for movement of the concrete slab relative to the adjacent structure without fracture of the strip of termite barrier material.

64. A method of termite barrier installation for a building structure, comprising the act of: during erection of the building structure on a slab of concrete at or near ground level, positioning a sheet coextensively with at least a portion of the slab, the sheet being formed of a material substantially resistant to termite secretions, the material having a hardness of not less than about Shore D70 for resistance to termite chewing, the sheet having open pores permitting fluid flow therethrough, to thereby exclude entry of termites into the building structure through said portion of the slab, the open pores having a maximum opening dimension less than 3.25 mm, wherein the positioning of the sheet comprises positioning the sheet beneath the slab.

65. The method of termite barrier installation as claimed in claim 64 wherein the slab has a perimeter, wherein the positioning of the sheet comprises positioning the sheet beneath the slab to extend to the perimeter of the slab in all directions and upwardly about said perimeter to terminate with an outer edge portion of the sheet at a distance above adjacent ground level.

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66. The method of termite barrier installation as claimed in claim 65 wherein the outer edge portion of the sheet terminates above the slab.

67 The method of termite barrier installation as claimed in claim 64 comprising casting the slab in-situ, wherein the positioning of the sheet comprises positioning the sheet prior to pouring of concrete over the sheet to cast the slab, wherein the sheet completely covers a ground surface area where the slab is to be poured, and further comprising the act of:

contouring the sheet to closely follow contours of the ground surface area where the slab is cast.

68. A method of termite barrier installation for a building structure, comprising the act of: during erection of the building structure on a slab of concrete at or near ground level, positioning a sheet coextensively with at least a portion of the slab, the sheet being formed of a material substantially resistant to termite secretions, the material having a hardness of not less than about Shore D70 for resistance to termite chewing, the sheet having open pores permitting fluid flow therethrough, to thereby exclude entry of termites into the building structure through said portion of the slab, the open pores having a maximum opening dimension of less than 3.25 mm, wherein the positioning of the sheet comprises positioning the sheet above the slab.

69. A method of termite barrier installation for a building structure, comprising the act of: during erection of the building structure on a slab of concrete at or near ground level, positioning a sheet coextensively with at least a portion of the slab, the sheet being formed of a material substantially resistant to termite secretions, the material having a hardness of not less than about Shore D70 for resistance to termite chewing, the sheet having open pores permitting fluid flow therethrough, to thereby exclude entry of termites into the building structure through said portion of the slab, the open pores having a maximum opening dimension of less than 3.25 mm, wherein the building structure includes a termite resistant structure



adjacent to and non-integral with the slab, and further comprising the act of:  
integrally securing an outer edge portion of the sheet to the termite resistant structure.

70. The method of termite barrier installation as claimed in claim 69, wherein the integrally securing act comprises:

adhesively bonding the outer edge portion of the sheet to the termite resistant structure.

71. The method of termite barrier installation as claimed in claim 70, wherein the bonding comprises bonding with a bonding material which is resistant to termites.

72. The method of termite barrier installation as claimed in claim 69, wherein the integrally securing act comprises:

mechanically fixing the outer edge portion of the sheet to the termite resistant structure.

73. The method of termite barrier installation as claimed in claim 69, wherein the termite resistant structure is of concrete, and wherein the integrally securing act comprises:

casting the termite resistant structure in-situ such that the outer edge portion of the sheet is embedded into the termite resistant structure.

74. The method of termite barrier installation as claimed in claim 69, wherein the termite resistant structure is a wall of brick, and wherein the integrally securing act comprises:

constructing the wall of brick with the outer edge portion of the sheet embedded in the wall between two layers of bricks.

75. A method of termite barrier installation for a building structure, comprising the acts of:  
during erection of the building structure on a slab of concrete at or near ground level,

positioning a sheet coextensively with at least a portion of the slab, the sheet being formed of a material substantially resistant to termite secretions, the

material having a hardness of not less than about Shore D70 for resistance to

termite chewing, the sheet having open pores permitting fluid flow therethrough.

the open pores having a maximum opening dimension of less than 3.25 mm,  
forming at least a portion of the sheet into a termite barrier flange; and  
clamping the termite barrier flange in pressure engagement about a perimeter of a  
member projecting through the slab, to thereby exclude entry of termites into  
the building structure through said portion of the slab.

76. The method of termite barrier installation as claimed in claim 75 wherein the forming at  
least a portion of the sheet into a termite barrier flange comprises cutting an opening in the sheet,  
said opening having a perimeter smaller than the perimeter of the member, and stretching and  
deflecting a marginal area of the sheet about the opening to form the termite barrier flange about  
the member.

77. A method of termite barrier installation in a building structure erected on a concrete slab  
at or near ground level and having an adjacent structure which is non-integral to the concrete slab  
and is termite resistant, the method comprising the acts of:

integrally securing a first marginal edge portion of a strip to a portion of the slab, the strip  
being formed of a material substantially resistant to termite secretions, the  
material having a hardness of not less than about Shore D70 for resistance to  
termite chewing, the strip having open pores having a maximum opening  
dimension less than 3.25 mm, the strip having a second marginal edge portion  
opposite the first marginal edge portion; and  
integrally securing the second marginal edge portion of the strip to the adjacent structure,  
to thereby provide integrity between the slab and the adjacent structure against  
passage of termites and thereby exclude entry of termites into the building  
structure.

78. The method of termite barrier installation as claimed in claim 77 wherein the integrally  
securing the first marginal edge portion comprises bonding the strip to the slab by adhesive  
bonding.

79. The method of termite barrier installation as claimed in claim 78, wherein the bonding comprises bonding with a bonding material which is resistant to termites.

80. The method of termite barrier installation as claimed in claim 77 wherein the integrally securing the first marginal edge portion comprises mechanically fixing the strip to the slab.

81. The method of termite barrier installation as claimed in claim 77 wherein the integrally securing the first marginal edge portion comprises bonding the strip to the adjacent structure by adhesive bonding.

82. The method of termite barrier installation as claimed in claim 81, wherein the bonding comprises bonding with a bonding material which is resistant to termites.

83. The method of termite barrier installation as claimed in claim 77 wherein the integrally securing the second marginal edge portion comprises bonding the strip to the adjacent structure by mechanical fixing.

84. The method of termite barrier installation as claimed in claim 77 comprising casting the slab in-situ and wherein the integrally securing the first marginal edge portion comprises embedding the first marginal edge portion into the slab during casting.

85. The method of termite barrier installation as claimed in claim 77 comprising casting the adjacent structure in-situ and wherein the integrally securing the second marginal edge portion comprises embedding the second marginal edge portion into the adjacent structure during casting.

86. The method of termite barrier installation as claimed in claim 77 wherein the adjacent structure comprises a wall of brick construction and wherein the integrally securing the second marginal edge portion comprises embedding the second marginal edge portion in the wall between two layers of bricks.

87. A method of termite barrier installation for a building structure, comprising the acts of: positioning a termite barrier flange around a member projecting through a slab of concrete at or near ground level, the termite barrier flange formed of a mesh material, the mesh material having pores, wherein each pore has a maximum opening dimension of less than 3.25 mm, the termite barrier flange comprising an inner peripheral portion defining an opening for the member and an outer peripheral portion extending from the inner peripheral portion; establishing a seal against the passage of termites between the inner peripheral portion and the member; and integrally securing the outer peripheral portion to the slab, such that the termite barrier flange protects against the passage of termites between the slab and the member projecting there through.
88. The method of termite barrier installation as claimed in claim 87 wherein the mesh material is substantially resistant to termite secretions, the mesh material having a hardness of not less than about Shore D70 for resistance to termite chewing.
89. The method of termite barrier installation as claimed in claim 87 comprising casting the slab in-situ and wherein the integrally securing comprises embedding the outer peripheral portion into the slab during casting.
90. The method of termite barrier installation as claimed in claim 87 wherein the establishing the seal comprises clamping the inner peripheral portion in pressure engagement with the member about a perimeter of the member.
91. A method of termite barrier installation for a building structure, comprising the act of: during erection of the building structure on a foundation structure, covering the foundation structure with a termite barrier flange, the termite barrier flange being formed of a material substantially resistant to termite secretions, the material having a hardness of not less than about Shore D70 for resistance to termite

chewing, the material having pores wherein each pore has a linear dimension in all directions less than 3.25 mm, to thereby exclude entry of termites into the building structure through said foundation structure.

92. A termite barrier flange for preventing passage of termites between a cast concrete slab and a member projecting through the slab, said termite barrier flange comprising a body formed from a material, the material having pores, wherein each pore has a maximum opening dimension of less than 3.25 mm, the having an inner peripheral portion defining an opening adapted to receive the member and an outer peripheral portion adapted to be integrally secured to the slab.

93. The termite barrier flange as claimed in claim 92 wherein the outer peripheral portion is adapted to be embedded in the slab during pouring of the slab for integrally securing the outer peripheral portion to the slab.

94. The termite barrier flange as claimed in claim 92 wherein the inner peripheral portion comprises a cylindrical sleeve adapted to be clamped in pressure engagement with the member about a perimeter of the member.

95. The termite barrier flange as claimed in claim 94 further comprising a clamp for clamping the cylindrical sleeve in pressure engagement with the member.

96. The termite barrier flange as claimed in claim 92 wherein the outer peripheral portion extends radially outward from the inner peripheral portion.

97. The termite barrier flange as claimed in claim 92 wherein the material is substantially resistant to termite secretions and has a hardness of not less than about Shore D70 for resistance to termite chewing.